App. Ser. No. 10/645,520

Atty. Dkt. No.: 080437.52615US

PATENT

IN THE CLAIMS:

Entry of the following amendments to the claims is respectfully requested:

1-4. (canceled)

5. (currently amended) A fuel cell comprising:

at least two individual cells with an electrolyte/electrode unit, said cells

each having a cell face opposing an adjacent cell face of another of the at least

two individual cells, said opposing faces disposed parallel to one another,

wherein one of said opposing faces is an anode of one of the cells and the adjacent

opposing face is a cathode of the opposing cell, and

at least one conducting end or intermediate plate extending <u>substantially</u>

<u>perpendicularly</u> between <u>said parallel</u> opposing <u>cell</u> faces, <u>each plate including</u>: of

the at least two individual cells via which a gaseous reactant can be supplied to

at least one electrode of at least one of the individual cells at least in one inlet

region, wherein

at least two substantially identical or mirror-image partial elements
paired together to form each plate,

air conducting channels or guiding areas arranged to direct a gaseous reactant directly along said anode and subsequently along said cathode, and

at least one section of a heat exchanger incorporated between the at least two partial elements and arranged to transfer heat from the gaseous medium on an anode side of the heat exchanger to the gaseous medium on a cathode side of the heat exchanger.

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the end or intermediate plate is designed to incorporate a heat exchanger which removes heat from an anode side of at least one of the individual cells.

the end or intermediate plate comprises air conducting channels or guiding areas configured in such a way that the gaseous reactant flows directly along the anode side and is subsequently supplied to a cathode inlet region,

the end or intermediate plate is composed of at least two substantially identical or mirror image partial elements arranged essentially perpendicular to the opposing individual cell faces, wherein at least one section of the heat exchanger is incorporated between the at least two partial elements, and wherein said at least one section is connected in terms of flow with the eathode inlet region with respect to which the anode section is separated in terms of flow.

6. (currently amended) A fuel cell comprising:

at least two individual cells with an electrolyte/electrode unit, said cells

each having a cell face opposing an adjacent cell face of another of the at least

two individual cells, said opposing faces disposed parallel to one another,

wherein one of said opposing faces is an anode of one of the cells and the adjacent

opposing face is a cathode of the opposing cell, and

at least one conducting end or intermediate plate extending <u>substantially</u> <u>perpendicularly</u> between <u>said parallel</u> opposing <u>cell</u> faces, <u>each plate including</u>: of the at least two individual cells via which a gaseous reactant can be supplied to

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at least one electrode of at least one of the individual cells at least in one inlet region, wherein

at least two substantially identical or mirror-image partial elements
paired together to form each plate,

air conducting channels or guiding areas arranged to direct a gaseous reactant directly along the anode and subsequently along the cathode,

at least one section of a heat exchanger incorporated between the at least two partial elements and arranged to transfer heat from the gaseous medium on an anode side of the heat exchanger to the gaseous medium on a cathode side of the heat exchanger, and

a baffle between the at least two partial elements, said baffle
arranged to create two partial flow regions through which the gaseous
medium flows successively and in opposite directions about the heat
exchanger.

the end or intermediate plate is designed to incorporate a heat exchanger which removes heat from an anode side of at least one of the individual cells.

the end or intermediate plate comprises air conducting channels or guiding areas configured in such a way that the gaseous reactant flows directly along the anode side and is subsequently supplied to a cathode inlet region,

the end or intermediate plate is composed of at least two
substantially identical or mirror-image partial elements arranged essentially
perpendicular to the opposing individual cell faces, wherein at least one section

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of the heat-exchanger is incorporated between the at least two partial elements,

and wherein said at least one section is connected in terms of flow with the

cathode inlet region with respect to which the anode section is separated in

terms of flow.

a baffle is introduced between the at least two partial elements such

that, in the heat exchanger, two partial flow regions, through which flow occurs

successively and in opposite directions, develop.

7. (original) The fuel cell according to Claim 6, wherein individual partial

elements of the at least one end or intermediate plate comprise spacer elements

so that the individual partial elements are arranged at a distance from an anode

and a cathode of individual cells while forming flow regions.

8. (original) The fuel cell according to Claim 7, wherein the spacer

elements are nubs.

9. (original) The fuel cell according to Claim 8, wherein the nubs are

produced through an embossing or deposition method.

10. (original) The fuel cell according to Claim 9, wherein surfaces of the

nubs come into contact with the baffle and have good electric interconnection

with the baffle.

11. (canceled)

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12. (currently amended) A fuel cell operating process comprising <u>the</u> steps of:

supplying a gaseous reactant to at least one electrode of at least one individual cell of a fuel cell, wherein the fuel cell includes at least in one inlet region by way of at least one conducting end or intermediate plate

at least two individual cells with an electrolyte/electrode unit, said cells each having a cell face opposing an adjacent cell face of another of the at least two individual cells, said opposing faces disposed parallel to one another, wherein one of said opposing faces is an anode of one of the cells and the adjacent opposing face is a cathode of the opposing cell, and

at least one conducting end or intermediate plate extending
substantially perpendicularly between said parallel opposing cell faces,
each plate including

at least two substantially identical or mirror-image partial elements paired together to form each plate,

air conducting channels or guiding areas arranged to direct a
gaseous reactant directly along the anode and subsequently along
the cathode, and

at least one section of a heat exchanger incorporated between the at least two partial elements and arranged to transfer heat from the gaseous medium on an anode side of the heat exchanger to the gaseous medium on a cathode side of the heat exchanger, and

removing heat from an anode side of the at least one individual cell by a with the heat exchanger. incorporated in the end or intermediate plate,

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wherein the end or intermediate plate extends between opposing faces of the at least one individual cell and another individual cell, and is composed of at least two substantially identical or mirror image partial elements which are arranged essentially perpendicular to the opposing faces of the at least one individual cell and the another individual cell, wherein at least one section of the heat exchanger is incorporated between the at least two partial elements, and wherein said at least one section is connected in terms of flow with a cathode inlet region with respect to which the anode section is separated in terms of flow.